

REMARKS

By this Amendment, claims 1, 20, and 27 are amended and claim 19 is canceled. Thus, claims 1, 3, 5-18, 20-26, and 55 are pending in this application. Claims 1 and 27 are amended to include the features of canceled claim 19. Claim 20 is amended to correct dependency. No new matter is added. Applicant respectfully requests reconsideration and prompt allowance of the pending claims at least in light of the following remarks.

Applicant appreciates the courtesies shown to Applicant's representatives by Examiners Toy and Peffley in the December 5 personal interview. Applicant incorporates a separate record of the substance of the interview into the following remarks.

As agreed during the personal interview, entry of the amendments is proper under 37 C.F.R. §1.116. In particular, the amendments (a) place the application in condition for allowance (for the reasons discussed herein); (b) do not raise any new issue requiring further search and/or consideration as the amendments simply incorporate a dependent claim into independent claims and correct dependency; (c) do not present any additional claims without canceling a corresponding number of finally rejected claims; and (d) place the application in better form for appeal, should an appeal be necessary. Accordingly, Applicant respectfully requests entry of the amendments.

The Office Action provisionally rejects claims 1, 3, 5-28, and 55 for obviousness-type double patenting over claims 1-21 of copending U.S. Patent Application 11/032,141. Applicant respectfully submits that this rejection remains provisional as copending U.S. Patent Application 11/032,141 has not yet matured into a patent. However, because U.S. Patent Application 11/032,141 has been allowed, Applicant hereby submits a Terminal Disclaimer disclaiming any term of a patent granted on the present application in excess of the term of the patent to be granted on U.S. Patent Application 11/032,141.

In view of the Terminal Disclaimer, the obviousness-type double patenting rejection is moot. Applicant respectfully requests withdrawal of the rejection.

The Office Action rejects claims 1-3 and 5-28 under 35 U.S.C. §103(a) over U.S. Patent No. 6,235,020 to Cheng et al. (hereinafter "Cheng") in view of U.S. Patent No. 5,067,953 to Feucht, in view of U.S. Patent No. 4,590,934 to Malis et al. (hereinafter "Malis"), and further in view of U.S. Published Patent Application No. 2002/0165530 to Harano et al. (hereinafter "Harano"); and rejects claim 55 under 35 U.S.C. §103(a) over Cheng, Feucht, Malis, and Harano in view of U.S. Patent No. 5,776,215 to Muri. Applicant respectfully traverses the rejections.

As agreed during the personal interview, the combination of Cheng, Feucht, Malis, and Harano at least fails to disclose, teach, or suggest that "the protection circuitry is responsive to the application of a short circuit at the output lines with sufficient speed that the supply of RF power to the output network is interrupted within a time period corresponding to no more than 20 RF cycles of the delivered RF power," as recited in claims 1 and 27.

In particular, as discussed during the personal interview, it is known within the art that that low impedance (e.g., less than $200/\sqrt{P}$ ohms) output devices are particularly prone to short circuits that can damage power generators of electrosurgical devices. Furthermore, it is known within the art that series-resonant circuits very quickly increase the amount current output. This increased current is beneficial, for example, for operations that require a quick and large increase in output current (e.g., underwater surgery); however, the large amount of current can damage a power generator during a short circuit. Thus, to this point, the art has avoided the combination of a low impedance output device and a series-resonant circuit due to the known increased likelihood of a short circuit (low impedance) combined with the known increased output (series-resonant circuit) which can cause significant damage to a

power source during a short circuit. That is, the combination substantially increases the likelihood of a short circuit that is damaging to the power supply.

As discussed at the interview, the claimed invention utilizes the previously avoided combination of a low impedance output device and a series-resonant circuit by controlling protection circuitry quickly enough to disable the power supply before a short circuit in the output lines can damage the power supply. Thus, as discussed during the personal interview, the claimed interval of 20 cycles is critical to the claimed invention because, upon a short circuit at the output lines, the 20 cycle interval is sufficiently quick to disable the power supply before the dangerous combination of the low impedance output device and a series-resonant circuit can damage the power supply (see page 5, lines 1-17, of Applicant's specification).

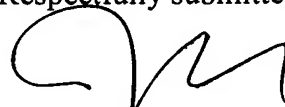
As agreed during the personal interview, the combination of references fails to disclose this feature. In particular, Harano is silent with respect to the speed with which control circuit 28 is capable of stopping the high output power. Furthermore, the control circuit 28 of Harano does not disable the output of the power supply 2 prior to a short circuit in the power supply 2, but disables the power supply in response to a short circuit in the power supply (paragraph [0067]). Thus, Harano cannot be considered to teach a response time quick enough to prevent a short circuit in the power supply, i.e., Applicant's claimed interval of 20 cycles.

Thus, as agreed during the personal interview, the combination of Cheng, Feucht, Malis, and Harano at least fails to disclose, teach, or suggest the features of claims 1 and 27. Muri fails to make up for this deficiency. Further, claims 2, 3, 5-26, 28, and 55 are patentable for at least the reasons that claims 1 and 27 are patentable, as well as for the additional features they recite. Applicant respectfully requests withdrawal of the rejections.

In view of at least the foregoing, Applicant respectfully submits that this application is in condition for allowance. Applicant earnestly solicits favorable reconsideration and prompt allowance of the pending claims.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, Applicant invites the Examiner to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachment:
Terminal Disclaimer

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